when the Kamchadal, Eskimo 101 563

salmon run begins, festivals of joy and work begin for young and old. As a rule the fish are caught in fixed traps, which are drawn across the river so that the way is barred for the fish as they go upstream. The fish press together in great masses in front of this weir and are caught with simple scoop nets. The common drying place is never empty, for it is important to preserve as many fish as possible for the entire year by drying them. In addition, an older method is still used occasionally: the fish are buried in the earth and there becomes sour; hence there is a kind of fish silo from which fish can be fetched during the winter as needed. A penetrating fish smell fills the entire settlement, and there is no end to eating during the catching season. It is not too much to say that the Kamchadal live on fish and tea. The dog, the most important domestic animal and beast of burden for all sedentary native northeast Siberians, is also fed on fish. The number of dogs is considered as the mark of wealth. There are families which have 200 to 300 dogs, which are housed in a pen near the house and fill the entire region with their hoarse barking. It is inadvisable for strangers to go near these half-wild animals. At present the horse is spreading more and more and is beginning to displace the dog as the beast of burden. Through the state organization of fishing and the introduction of modern methods, large sections of the Koryak have also been incorporated and placed in a new order. Many have also turned to agriculture and cattle-breeding.

[226] [251] [231]

/111/ The Asiatic Eskimo live on the banks of Bering Strait and occupy 17 villages with approximately 1,600 people. They extended much further formerly; and it is for this reason that there are Eskimo names for places now occupied by Maritime Chukchee. The displacement of the Eskimo must have been done simply by force, for the sagas of the Chukchee are filled with reports of hard battles with the Eskimo, battles which, however, ended long before the entrance of the Russians. Today the two peoples live harmoniously beside one another in separate villages. The Asiatic Eskimo differ from their relatives in Alaska in their speech but culturally they form a unit with them. With their life completely directed toward the sea, they seldom go into the interior of the land; for such occasions they use dog sleds. On the Commander Islands live approximately 500 Aleut, who, according to their language, are related to the Eskimo. They, too, live completely from catching sea animals, since the islands offer them only birds.

[174]

As has already been said, the Buryat Mongols have a cultural

241 to the cultivation of sugar beets; the area devoted to their cultivation has again increased in the Khanka Lake area. Tea is supposed to become a new product of the /Russian/ Far East. In 1950 /131/ the [242] Botanical Institute of Leningrad sent an expedition there in order to explore, by attempts at cultivation, the practical possibility of planting tea bushes.

241 433 All the reports mentioned above are only individual pictures of the agricultural film which is being run in the Far East. These pictures show the great strivings of the Soviet Union to use all its power to advance agriculture in these regions. If the grain harvest in the actual Far Eastern area had increased 150 percent in 1947 as compared with 1913 and the potato harvest had even increased 200 percent (Trud, 25 October 1947), this increase in production stands in contrast to an approximately 300 percent increase in population in the same period; accordingly even today the same problems still exist in supplying the population of this area with food, as has been described in the above chapter, since an additional population increase runs parallel to the increase in production, even though the two curves may perhaps have gotten somewhat closer since 1947. The actual Far Eastern regions (not including the Buryat Mongol ASSR and the Chita Oblast) can still be regarded even today as import areas in terms of food. Their dependence on obtaining supplies is alleviated by the increased cultivation of potatoes and soy beans, and import at present is no longer a problem since Manchuria with its agricultural surplus has been brought into the Soviet sphere.

Animal Breeding

231 433 In the livestock-breeding of the Soviet Union Transbaykal assumes a prominent position. While on the average there are 233 cattle to 1,000 persons in the Soviet republic, there are 1,367 cattle to 1,000 persons (1938/39) in the Buryat Mongol ASSR; and while there are 602 sheep and goats per 1,000 persons on the overall average in the USSR, there are here 1,786. The important livestock-breeding areas lie left [232] of the Selenga and right of the Ude. The breeding of better strains is being carried out according to plan by crossing the Mongol cattle with the Simmentaler and by crossing the native sheep with the Rambouillet-Merino. The steppe region left of the Selenga is thus the breeding ground for improved strains. The livestock here is housed for the winter in warm stalls and fed with prepared feed. The horse, which constitutes

11.7 percent of all the livestock, and also the pig, which constitutes 6.7 percent, play a slight role in the animal economy. The situation of animal breeding in Chita Oblast is similar and has the same favorable perspectives. Dairy farming stands in the foreground here in cattle breeding. In the steppe regions of the Onon and Argun a number of studs also serve horse-breeding. In the same region camels are also bred, whose number is given at 7,000. Transbaykal as a whole is a surplus area both in grain cultivation and in animal breeding. 231 433 [234]

/132/ The following table indicates how very prominent the Buryat Mongol ASSR and Chita Oblast are in animal breeding in the overall economy of the Soviet Union:

On a collective farm in 1938 there were:

	Soviet Union	Buryat Mongol ASSR	Chita Oblast
Horses	0.7	2.0	2.5
Cattle	2.2	6.0	6.5
Sheep, goats	2.9	19.0	11.9

It is different in the Amur and Ussuri country. Animal breeding is insufficient and doesn't even cover the needs of the area. Even horses must be imported. In the southern part of the Ussuri region milk and work cattle are kept; otherwise a dairy cow farming worthy of mention has developed only in the vicinity of the cities. Meadowlands are lacking for the maintenance of cattle on a large scale. On the other hand cattle can be found in isolated cases everywhere, even in the far north. On Kamchatka their number reaches several thousand. The number of pigs in the Amur and Ussuri region is comparatively larger than in Transbaykal since the Chinese and Koreans also keep pigs. The quality, however, is low. In meat supplies, too, the Far Eastern region requires additional imports.

The reindeer breeding in the extreme northeast of the region deserves special attention. The moss tundra extending from the Chukchi Peninsula into Kamchatka offers excellent grazing land. With the European north, these regions stand in first place in reindeer breeding in the Soviet Union, which has contributed in its further development by establishing several reindeer sovkhoz. The number of animals is estimated at a total of approximately 750,000. The reindeer not only provides meat for local needs, but also provides meat for canning, for which a special factory has been erected in Anadyr'. The hides of

231
433 the young reindeer are processed for leather and as wild leather (chamois leather) are a product in demand for export.

Hunting

224 The valuable fur-bearing animals, once so numerous, have almost completely disappeared from the settled areas and have withdrawn into the inaccessible wastelands. And, nevertheless, the Far Eastern region with its vast, wild forests is still, even today, a grateful empire of hunters. Approximately a third of the furs acquired in the Soviet Union are won in the Far East. Transbaykal is not so active in this. Squirrels and foxes provide the bulk of the skins ; the sable has been completely exterminated in wide stretches of land and is now only rarely encountered. In the tundra region the Polar fox is the most important animal hunted. /133/ The number of large wild animals has also been heavily decimated by the earlier rapacious hunting. The spotted stag /Fleckenhirsch/, sought because of its "Panten" /unhardened antlers/ and formerly very numerous in the Amur and Ussuri region, occurs now only very rarely in the open hunting ground and is kept today only in animal parks in the Sikhote-Alin'; of these seven are known with several thousand stags. For the protection of the plant and animal world rather large areas in the Sikhote-Alin', on Kamchatka, and on Lake Baykal have been declared nature protection areas.

Hunting for fur-bearing animals is organized by the state and is done from numerous "bases," where the hunter receives not only his hunting equipment but also other necessities of life, and then goes out to hunt in cadres. In their hunting, these state hunters have to follow fixed instructions, varying from place to place, for the sparing and preservation of the wild life. At the end of the hunting period the skins are delivered to the bases, and the hunter is paid according to his output.

Fishing and Hunting of Sea Animals

226 In Transbaykal, which lies inland, fishing has only a subordinate role. Apart from small lakes, which are, however, rich in fish, the fishing practised professionally is concentrated on Lake Baykal. Its outstanding fish is the omul (Coregonus omul Pall.), a type of salmon, [255] whose spawn is bred and set out. Some fish canning factories in various ooo localities on the coast process the catch not used locally. Not insignicant

Both types of steppes[1] have developed on chestnut-colored soil. Within these steppes salt-pans also appear. Further toward the north the soil becomes darker, its humus content becomes greater (3 percent to 5 percent), it changes into the so-called southern black earth, which has only a slight thickness and has a carbonate layer lying near it. The plant growth becomes richer, the contiguousness of the vegetation covering becomes thicker. These are pronounced grazing areas for sheep and goats. For large livestock they are still not sufficient. For such livestock only the meadow steppes can be considered; these meadow steppes often cover large areas along the rivers. To this category belong the Selenga steppes and the valleys of the Dzhida and the Uda. A similar change in the character of the steppes takes place in the direction of the individual mountain chains, with the various types of steppes surrounding the mountain ranges in Isohypsen /isohyetal?/ contours.

The principal importance of the Selenga steppes lies in livestock breeding, which is intensified by the breeding of valuable breeds. The most important regions here are the areas left of the Selenga and the already mentioned valley of the Dzhida. The old yurts of the Buryat have disappeared, and in their place small, permanent, modest wood houses have appeared which in long rows surround the kolkhoz buildings of the concentrated livestock economy. However, in the less favorable grazing areas, as in the Kundara steppe east of Kyakhta, the old Buryat life has been retained. For processing the resulting skins, a rather large leather processing plant has been erected here on the middle Chikoy under the name of Chikoyskiy Zavod. This plant also draws its raw materials from Mongolia. The cultivation of grain is more in the foreground in the other regions on the right side of the Selenga, especially on the lower courses of the Chikoy and the Khilok.

The broad steppe valley of the Uda is the second most important animal breeding area in the Buryat-Mongol ASSR, especially since here numerous Russians have been drawn into animal breeding. In the area around the upper course of the Uda, in the region of the Yeravninsk plain, which is rich in lakes, numerous Russian villages have come into being in which, in addition to slight agriculture, excellent dairy farming is pursued. The largest localities in this region are Gunda and Sosnovo-Ozerskoye.

East of the Selenga, rising from its delta, is the mountain ridge of the Ulan-Burgassy, which forms the watershed between the Uda and the Turka, which empties into Lake Baykal. This mountain range is broader than the Khamar-Daban and has a marked plateau-like surface

[1] [i.e. artemisian and meadow steppes -- Analyst]

133 Side erosion predominates. Gradually the ridges dissolve into hills. This landscape, designated by Presnyakov as the Gobi type, takes up the entire southern part of the Argun region. Here are the mountain steppes of the Onon and Argun. The Tarey Basin, which is also designated as Onon plain by Russian geographers, should be named as the third province. The Tarey forms a basin with no outlets and extends beyond the Mongolian border as far as the Kerulen. In the center lie the Tarey lakes, of which various ones cover a significant area. Thus the Barun Tarey covers 435 square kilometers, and the Sun Tarey covers 300 square kilometers. The countryside is for the most part level and is interrupted only by former river valleys and lake basins which are now dry. The /228/ remaining lakes lie 60 to 70 meters below the general surface, i.e. at an absolute height of 620 meters, but they are always still up to 5 meters deep. Despite the clear signs of recent drying up, water springs appear in many places on the surface. These springs form the centers of human life. The steppe character often gives way already here to wasteland forms.

The border between steppe and forest extends from Aksha on the middle Onon via Il'inskaya to the north to the watershed between Aga and Ingoda, then on the Ingoda to the east to the mouth of the Aga. From here the border circumscribes the Argun mountain country in an arc swinging to the south via the localities of Onon-Borzya, Akatuy, and Algachi. The border then turns again toward the northeast via Nerchinskiy-Zavod to the Argun.

Southeast of Chita there begins the Aginsk steppe, a true grass steppe, which takes up the river area of the Aga and the middle Onon. [231] Here lies the national oblast of the Buryat, who have made the area into an important livestock-breeding region. The Argun steppe takes up the entire southeast, where livestock breeding likewise dominates the economy. But here there are Russians, who pursue the breeding of cattle and sheep in large, specialized, state farms. In addition, [241] there are also some state farms for horse breeding. To the north of both steppes agriculture, with wheat as the main product, is diffused over a large area, and in a broad front it penetrates to the south. [361] Along the great rivers and also along the Argun the villages extend in a line through the middle of the steppe. The diffusion of agriculture [134] is favored by the circumstance that, despite the often very poor steppe vegetation, a horizon very rich in humus, a type of black earth, has developed under the pitted grass /Grasnarbe/.

000 The wealth of natural resources is, however, of far greater

The breeding of livestock is pursued in the entire area: cows, horses, and pigs are kept in the main. Ukrainians, Koreans, and Chinese use the ox also as a work animal in the field; the Great Russians, however, do not. Everywhere there is the slender, black Chinese pig, which is of little value. Modern, planned breeding of livestock became possible only after the introduction of valuable breeds by the Soviets in the kolkhoz and sovkhoz.

Under Soviet rule greater improvement work has been carried out in the region of the Ussuri and of Khanka Lake, and further draining is planned. Many things have occurred for the further development of the area through the employment of machines in agriculture, for which these regions are especially suited. The cultivation of rice, soy beans, and sugar beets has been especially fostered in the last few years. The cultivation of sugar beets was introduced here as a new cultivated plant only under Soviet rule. Nothing can be said about the collectivization, which was carried out later in the Far East than in the European part of the Soviet Union and which was carried out only gradually. Nor can anything be said about the type of organization in this area filled with men of the most varying types.

/271/ /Sketch Map:/

/272/Voroshilov constitutes the center of this important agricultural area. Voroshilov lies at the point where the Ussuri Railroad meets the Manchurian Railroad, which, hurrying from Transbaykal across Manchuria, again enters Soviet Russian territory here. The city lies 30 meters above the sea and is 102 kilometers from Vladivostok. It has 70,600 inhabitants (1939) and is the center of a lively food industry. It has a large oil and fat works for processing soy beans. To this works also belongs a soap-boiler and a factory for cosmetic articles. The city has special importance as the seat of two first and largest sugar factories in the Far East. The city of Spassk (approximately 30,000 inhabitants), which lies southeast of Khanka Lake, should be mentioned as the next most important locality. In addition to flour mills and oil pressers, Spassk has the largest cement factory in the Far East. As the last locality on the railroad before the Manchurian border, Grodekovo (approximately 10,000 inhabitants) is worthy of mention. Grodekovo already lies in the western mountains, but with its predominantly wooden houses, it gives a typically Russian border impression, despite its nearness to the border.

From Voroshilov the railroad leads to the south first through hilly country, then, 30 kilometers from Voroshilov, it crosses some

these the wood industry should be mentioned in first place. It is concentrated above all in Shkotovo (approximately 10,000 inhabitants) and Tigrovka (approximately 5,000 inhabitants), both of which lie on the railroad line to Suchan. The wood industry is also concentrated in Okeanskaya (approximately 2,300 /277/ inhabitants) to the north of Vladivostok, where a large wood factory delivers veneer wood for export.

The industry in Vladivostok, like industry generally in the southern Ussuri country, is based on coal, which is on hand here in rich measure. Besides the various smaller coal mining localities, Artem and Suchan should be mentioned here as the principal localities producing coal. Already by 1938 the coal mined in Artem exceeded that mined in Suchan by threefold, and since then coal mining in Artem has been very much further increased. To Artem belong also the two coal districts, Ugol'naya and Trudovaya. The new railroad line, which leads along the western coast of the Bay of Peter the Great to Pos'yet and Kraskino, connects the most important coastal localities, which above all pursue the catching of fish. In the same region there are some sovkhoz for breeding stags at Peschanaya, in Krabbe, and on the Gamova Peninsula.

Sakhalin Island

Sakhalin came to Russia through the treaties of Aigun (1858) and of Peking (1860). However, until 1871 Russia had to share possession of the island with Japan, which in early times had already erected numerous factories in the southern part of the island. Through the unhappy Russo-Japanese War, Russia lost the southern half of the island to Japan. The fiftieth latitude was determined as the boundary line. The outcome of World War II brought the Soviet Union again in possession of the entire island.

Sakhalin covers 80,000 square kilometers and stretches from north to south in an almost meridional direction for about 1,000 kilometers. Once feared as a prisoners' colony of the Czarist empire, the island is notorious for its raw climate. The famous Russian writer A. Chekhov writes, "Sakhalin has no climate at all; the weather is eternally bad and gloomy." The island owes this unhappy reputation to the influence of the cool Sea of Okhotsk, to which the bulk of the island is fully given over. The greatest part of the island is covered with thick forests, which recall the taiga of Siberia. Along the coast

bamboos (Sasa Kurilensis), which, however, are limited to the western mountain range. This is the only region in the Soviet Union in which bamboo grows wild. In places the bamboo forms a thicket which appears almost tropical and which is difficult to get through.

The native population in northern Sakhalin is very small in number and comprises some thousand Gilyak and Orok. The Gilyak reside more at the mouths of rivers on the coast and provide for themselves by fishing and hunting. The Orok occupy themselves principally with the breeding of reindeer; for this they wander as nomads, even though within narrow borders, between the moss steppes in summer and the border regions of the taiga. The number of reindeer is modest.

The Russian population in northern Sakhalin has increased many times in number in the last three decades. In 1926 it was estimated to be 20,000, but already before World War II it grew more than 100,000, and since then it has further increased. The population is concentrated essentially in three areas: Aleksandrovsk and the western coastal strip, /281/ which is made prominent economically by its coal mining; then the oil district in the north and on the northeastern coast; and, finally, in the valley of the Tym' and Poronay, which has a smaller percentage of the population. The population here is more agricultural. In general, however, the agrarian economy is still little developed. In the last few years the Soviet administration has striven to ensure food for the industrial population both in the coal oil regions at least in part from local production. To be sure, the areas under cultivation are planted with bread grains, especially in the protected longitudinal valley, where there is a large number of kolkhoz and sovkhoz; however, the production yields only slight surpluses. In the other regions the climatic conditions are too unfavorable to be able to develop cultivation of grain in a grand style here. On the other hand, it is different with the cultivation of potatoes, cabbage, and vegetables. Great successes are to be recorded in this connection. Especially prominent are the high yields of the potato harvests. On the basis of this experience a transition has been made in very recent times--apart from supplying the necessary potatoes for human nourishment--to enlarging the cultivation of potatoes in a planned fashion and to developing the breeding of pigs on a large scale on the basis of this. There are numerous reports of success on this.

The capital of northern Sakhalin (the capital of the oblast is now Yuzhno-Sakhalinsk) is Aleksandrovsk, which has approximately 20,000 inhabitants. It is the export harbor of the coal region. The

The harbor has in very recent times been expanded and provided with modern loading equipment. Since the Tatar Sound is very shallow, this equipment had to be moved very far out into the sea. To be mentioned in second place is Okha (approximately 25,000 inhabitants), the most important center of the oil region on the northeastern coast. During the last war the city got a sea harbor of its own, which is supposed to be usable throughout the entire year. South of Okha lies Ekhabi, which has often been mentioned recently for its rising oil production. A railroad and an oil pipe lead from Okha to the oil harbor of Moskal'vo, which lies on the eastern side of Baykal Bay in the northern part of the island. Furthermore, in the past few years there have been established along the coast numerous, permanently inhabited fishing bases, which give life to the entire picture along the coastal strip. The largest part of the interior is still untouched and given over even today to the native population and their primitive economy.

In southern Sakhalin (Karafuto), which was formerly Japanese, the natural landscapes continue as they have already been generally described. The western mountain range, which here has heights of up to 1,375 meters, forms the backbone and stretches to the south beyond the 46th latitude, while the eastern mountain range already ends north of the 49th /282/ latitude. The Poronay Valley ends even before that after it has spread out to a width of 30 kilometers.

As in northern Sakhalin, so here, too, the largest part of the land is covered with primeval forests, which consist of the same type of trees as in the north, only here the percentage of deciduous trees is larger and increases especially on the lower slopes and last spurs of the western mountain range. Even though the climatic conditions became somewhat milder with the southern location, tundra-like moss steppes appear here also. Reindeer breeding is still pursued today by the native population, the Orok and the Tungus.

The population of southern Sakhalin was 332,000 in 1936 and 412,000 in 1940; the increase can be traced for the most part to immigration from Japan. Of the old, native peoples scarcely 2,000 existed; of these the Ainu, who number 1,500, constitute the main part. The rest is divided among Gilyak, Orok, and other Tungus tribes.

The economic importance of southern Sakhalin lies in the wood supply of its forests, in its coal deposits, and in the wealth of fish in the waters near the coast. The Japanese have done much for the economic development of the land and also have attained much. Above all they are to be thanked for the opening up of the land through

361 ships and indeed in many instances make departure impossible. From
505 Ayan a route starts toward Yakutsk. This route rises steeply over the mountain range to Nel'kam on the Maya, a left tributary of the Aldan. From here the rest of the way is on the rivers, via the Maya, the Aldan, to the Lena. Ayan, which is notorious for its heavy rainfall, cannot really make progress despite its favorable natural harbor; and, although the beginnings of its development reach far back, Ayan has scarcely 1,000 inhabitants.

361 In the north the Dzhugdzhur Ridge bends away from the coast and makes way for a vast coastal lowland which penetrates deeply into the land. Here, at the mouth of the Okhota, which forms a good natural harbor, lies the village city of Okhotsk, the first and oldest harbor of the Russians on the Pacific. In addition to a telegraph line, Okhotsk has a land route connection with Yakutsk. The use of this route causes fewer difficulties than the route from Ayan. At present Okhotsk is an
563 important fish collection point. On the coast and also in the hinterland
241 of the depression, numerous Russians have settled. In addition to an
231 agricultural economy based on the cultivation of potatoes and vegetables, these Russians devote themselves to the breeding of livestock, which does very well here in the natural meadows of the alluvial plains. Tungus Lamut have joined the Russians, too. These Lamut, in addition to fishing, devote themselves also to agriculture, which they have taken over from the Russians. They apply themselves with the same care to the ox as for generations they have done with the reindeer. Farther in the hinterland of the lowland there are still Reindeer Tungus in large numbers. These Tungus wander as nomads between the bottom of the valley and the mountain tundra.

133 Northeast of Okhotsk the coastal provinces /288/ have another, more varied character. There is not, as is often still represented on many maps, an interrelated mountain chain which runs parallel to the coast; at least there is none between Okhotsk and the Yama, a river east of the P'yagina Peninsula. On the contrary, east of the Okhotsk, spurs of the Cherskiy Mountain Range run into the coast almost at right angles, and between these spurs relatively wide and long valley areas stretch from the coast far into the interior. In addition, in order to make the picture more colorful, there is farther to the east another orographic element, which is limited, however, to the peninsulas and islands. This is a heavily destroyed and broken up mountain chain, which runs approximately parallel to the coast and which, according to the present level of knowledge, is reckoned as belonging to the inner arc of the

133 These volcanos, /299/ projecting far beyond the general level, give the landscape of Kamchatka its peculiar picture.

137 The bottoms of the valleys, if they are not too very swampy and covered with moss, have luxuriant meadows, which appear especially in the southern part of the peninsula and which offer excellent grazing ground for livestock. The introduction of the breeding of livestock has, therefore, attained the greatest measure here, too. To be mentioned especially as characteristic of the landscape picture are the high-growing plants in these regions, especially the umbrella-shaped "sweet grass" (Heracleum tanatum or Heracleum dulce), which grows up to 4 1/4 meters high and develops a stalk 12 centimeters thick. The natives use the juice of this rapidly growing plant to sweeten their food; the Russians earlier extracted alcohol from the plant by fermentation.

[231] [243] [273]

133 137 Entirely in contrast to the forest and park landscapes of the mountain regions which are rich in vegetation, are the tundra-like moss steppes which stretch in a broad zone along the entire western coast. In the east, on the other hand, these moss steppes form only a narrow rim around the bays. Occasionally these steppes occur also in the valleys of the mountain ranges. These monotonous regions are depressingly dismal and gloomy especially when a veil of fog hangs over them and prevents seeing any distance.

161 The population of Kamchatka according to estimates, scarcely numbered 20,000 in 1914, and the native element was in the majority at that time. But after World War I and up to the present the population has multiplied because of the increased immigration of Russians, and by 1945 the population was given at around 100,000. Thus today the Russians are predominant, constituting approximately 80 percent of the total population. Today their number is estimated to be at least 150,000. The sedentary population is divided among three lines of settlements: the east coast, the west coast, and the Kamchatka Valley.

563 The Koryak and Kamchadal constitute the bulk of the native population. The Koryak occupy the northern half of the peninsula and the adjoining mainland between the Penzhina depression in the west and the coast of the Bering Sea on the east. On Kamchatka itself they live on the west coast as far as the Sopochnaya River in the south and in the region around Litke Bay. In the Kamchatka valley itself they are no longer to be encountered. Their region of residence has been brought together into a national okrug, in which they, as well as the Chukchee, enjoy cultural autonomy. The capital of their

oblast is Palana, which lies on the river of the same name on the west coast. Almost half the Koryak are sedentary and live in wooden houses, built after the Russian model, in villages on the coast or on rivers, where they live from fishing and hunting. All breed the dog as a domestic animal. Already gardens, in which they grow potatoes and vegetables, are also very often to be found near their houses. The bulk of the Koryak, however, remain in /300/ reindeer breeding and are developing the same good qualities which the Chukchee possess in this respect. Apart from the Samoyed in the northern part of the European tundra, the Koryak and the Chukchee are the best reindeer breeders in the Soviet Union, and they also have more than a third of the total stock of reindeer in the USSR. The Kamchadal occupy the southern part of the west coast, the Kamchatka valley; and many of them are also to be found as workers in the fishing localities on the east coast. They are under the influence of the Russians in all things and have become completely sedentary. Fishing and hunting, however, have remained their principal occupations. But they have in many cases already given up the breeding of dogs and keep horses, which are more and more displacing the dog as the riding and draft animal in the southern part of Kamchatka. The cultivation of vegetables and potatoes has already become a rule with them. In the central, more remote part of Kamchatka, there still lives a smaller number of Tungus Lamut, who are only reindeer breeders. Hemmed in by the more progressive Koryak and Kamchadal, they constitute the poorest population on the peninsula. Their herds are only small ones, and during harsh winters they are to be encountered begging among the rich Reindeer Koryak.

The heavy immigration of Russians can be traced back to state guidance. In the years 1930 to 1933 alone 15,000 settlers came into the land. The capital Petropavlovsk had around 28,000 inhabitants in 1939, which was more than all Kamchatka had before 1914, and today Petropavlovsk's population is around 40,000. A great part of the increase in population can be traced back to the building up and the modernization of fishing and the catching of sea animals. Here there was formerly a shortage of workers, and this shortage forced them to bring thousands of seasonal workers every year to Kamchatka for the catching period. Among these seasonal workers there were many Koreans and Chinese. This shortage has been eliminated by immigration. Furthermore new industrial undertakings, especially complementary branches of the fish processing industry, have come

into being. However, a significant part of the immigration has been also for the benefit of agriculture, which, according to all reports, has made extraordinary progress. Thus, Kamchatka, which earlier had to have the bulk of its food supplied from outside, already gets along in large part with its own production, and the goal of autarchy in terms of food will probably soon be reached.

In the southern part of the peninsula, which has a mild climate, the breeding of cattle has attained a great and continually growing significance. The climatic conditions here are approximately the same as those of Sweden. The number of cattle had already reached several thousand head by 1939. A series of livestock sovkhoz have taken over the job of supplying milk and meat to the localities engaged in the fishing industry. In the Kamchatka valley and in the environs of Petropavlovsk agriculture, too, has made a start. The area under cultivation increases from year to year. In sovkhoz and kolkhoz grain, potatoes, and vegetables are cultivated with success. Fruit /301/ trees were introduced, and today are already yielding their own apples. A series of agricultural experimental stations in the interior and also in the coastal regions are to prepare the further development of agriculture and the breeding of livestock.

Of greatest importance for the economy of Kamchatka is fishing and the catching of sea animals. In this respect Kamchatka is the most important area in the Far East, and it is especially prominent because of the appearance of highly valuable types of salmon. The west coast has the principal role in the catching of salmon and crabs. On the east coast the area around the mouth of the Kamchatka is a pronounced salmon region, while Petropavlovsk constitutes the center of the catching of sea animals. From passive, rapacious catching of fish in immovable, built-in traps--the so-called "fish dams," which blocked the river--a transition has been made to catching the fish in sweep nets and drag nets. Thus the fish are now not caught at the mouths of the rivers alone but also in the sea. The earlier, primitive covering of the mounds of caught fish with salt, a practice which was customary on the entire coast of the Far East and under which great quantities of fish spoiled, has given way to smoking of the fish and salting of the fish in vats and above all to processing in canning factories. Modern fishing steamers with processing equipment on board have contributed to making Kamchatka today the second fish-catching region in the Soviet Union, second only to the Caspian Sea. In the catching of crabs Kamchatka even is in first place in the

world. The crabs are extraordinarily large and attain lengths of half a meter and more. They are drawn up from the bottom of the sea in drag nets in which they get entangled. Worthy of mention in this connection are the floating crab canning factories, which are used on the west coast and which carry out on board all the work from catching to canning.

The capital of the peninsula is Petropavlovsk. The city lies on Avacha Bay, which freezes over only exceptionally. The bay is surrounded in a semi-circle by the panorama of high volcanos. The city's favorable natural harbor, which a short while ago got a shipyard with a dock for ships of up to 5,000 gross registered tons, gains more and more in importance since the ships of the Northern Sea Route spend the winter here before they start out on their trip to the north. This applies especially to ships which regularly travel to the Kolyma River in order to ensure supplies of heavy materials to the gold regions on the upper course of the Kolyma. Petropavlovsk is the center of the hunting of sea animals and of the industries connected with this. In addition, the city also has fish processing installations, a brickyard, saw mills, and a can factory, which is of especial importance since it supplies the necessary material to all the smaller fish processing localities. In the treeless delta of the Kamchatka River lies Ust'-Kamchatsk, the next most important locality on the peninsula. More than 2,000 workers /302/ work in the canning factories there in the summer. The locality, in addition, has a special importance as the gateway to the interior of the peninsula, which can be reached easily only through the Kamchatka valley, while the other approaches have to overcome difficult passes. In increasing measure also wood is floated down the Kamchatka River to the coast, where it is processed in and sent on from Ust'-Kamchatka. In the broad longitudinal valley of the Kamchatka there are a series of villages, among which Verkhne Kamchatsk and Mil'kovo should be mentioned. In this area removed from the coast, horses are kept, since supplying fish food for dogs causes difficulties. At the inner entrance to the cross valley, at the foot of the largest volcano cone, lies the village of Klyuchi, from which the volcano receives its name. Here the traffic lines from the interior merge and make the locality into a central trading place, especially for fur goods. In addition to Russians and Koryak, some Chinese and Koreans have also settled here. Klyuchi has a scientific observatory for the study and special observation of the Klyuchevskaya Sopka. Below the village the Kamchatka widens into a sea decorated with islands.